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# New Taxa of *Fuchsia* (Onagraceae) from Northern and Central Peru

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**ABSTRACT.** Two new taxa of *Fuchsia* from northern and central Peru are described and illustrated: *Fuchsia rivularis* subsp. *pubescens* P. E. Berry & Hermsen, a member of the large section *Fuchsia* from Cajamarca, and *Fuchsia mezae* P. E. Berry & Hermsen, a member of the apetalous section *Hemsleyella* from Huánuco.

Section *Fuchsia* is the largest of the 11 sections of *Fuchsia*, with 65 species. In the latest revision (Berry, 1982), several species were treated rather inclusively, acknowledging aberrant populations, but with too few specimens or too little information to place them in a different taxon. One of these was *F. rivularis* J. F. Macbride, known primarily from Amazonas in northern Peru, but with disjunct populations occurring across the dry Marañón River valley to the west in Cajamarca. Now that additional collections have been received from botanists from Cajamarca, we feel justified in describing the western populations as a new subspecies of *F. rivularis*. We also describe a distinctive new species of the apetalous section *Hemsleyella* from central Peru.

***Fuchsia rivularis* subsp. *pubescens*** P. E. Berry & Hermsen, subsp. nov. TYPE: Peru. Cajamarca: trail from Chorro Blanco to San Andrés, Cutervo National Park, cloud forest, 2100–2200 m, 6°10'S, 78°45'W, 15 Sep. 1991, A. Gentry et al. 74844 (holotype, MO). Figure 1.

Haec subspecies *Fuchsiae rivulari* subsp. *rivulari* similis sed ab ea foliis pubescentioribus minoribus apice emarginato acutove atque tubo florali angustiore distinguitur.

Scandent shrub or liana to 10 m above ground, with long, flexuous-arcuate, mostly unbranched shoots to several meters long. Young growth densely puberulent, the branchlets with erect trichomes ca. 0.25 mm long, older branches with exfoliating brown to red-brown bark. Leaves in whorls of 3 or 4, blades elliptic to obelliptic, 3–6 × 1–3 cm, apices variable from rounded and mucronate to obtuse or acute, bases acute to obtuse; upper leaf surface

green and sparsely pubescent, the lower surface paler and densely pubescent in young leaves, with erect trichomes ca. 0.25 mm long, older leaves with trichomes persistent along the midvein and secondary veins of both surfaces, margins subentire to glandular-denticulate, secondary veins 13 to 15 on either side of the midvein, the midrib elevated on lower surface; petioles stout, pubescent, 2–4 mm long; stipules narrowly lanceolate, 1.5–2 mm long. Flowers to 4 per node, pendent in the uppermost leaf axils; pedicels drooping, pubescent, 12–18 mm long, 1–2 mm thick; floral tube narrowly funnel-form, 47–58 mm long, 3–5 mm diam. at the slightly bulbous base, narrowing to 2–4 mm wide above, then widening again to ca. 8 mm wide at the rim, pubescent outside, more sparsely pubescent inside; sepal lobes 4, spreading at anthesis, narrowly lanceolate, 16–17 mm long, ca. 4 mm wide at the base, the distalmost 2–3 mm free in bud, densely pubescent outside, glabrous inside; petals 4, glabrous, narrowly elliptic, 16–18 mm long, 4–5 mm wide at the midpoint. Stamens 8, the antesealous ones 12–13 mm long, the antepetalous ones 8–9 mm long; anthers ca. 4 × 1.5 mm. Ovary cylindrical, ca. 7 × 2 mm; style sparsely pubescent and protruding from the floral tube; stigma capitate, slightly 4-lobed at the apex, 2–2.5 mm long, ca. 1.5 mm wide. Unripe berries oblong, 8–12 mm long, 3–6 mm thick, densely pubescent.

*Ecology and distribution.* Only known to occur in cloud forest between 2000 and 2500 m elevation in Cajamarca in northern Peru.

This new subspecies differs from subspecies *rivularis* by having short, dense indumentum on the leaves and young stems, which is much less evident in subspecies *rivularis*. *Fuchsia rivularis* subsp. *pubescens* also has more slender flowers than subspecies *rivularis*, a more pilose style, and smaller, emarginate to acute leaves. *Fuchsia rivularis* subsp. *pubescens* is geographically separated from populations of subspecies *rivularis* by the dry, low Marañón River valley, a well-known biogeographic barrier to mesic montane taxa in northern Peru.

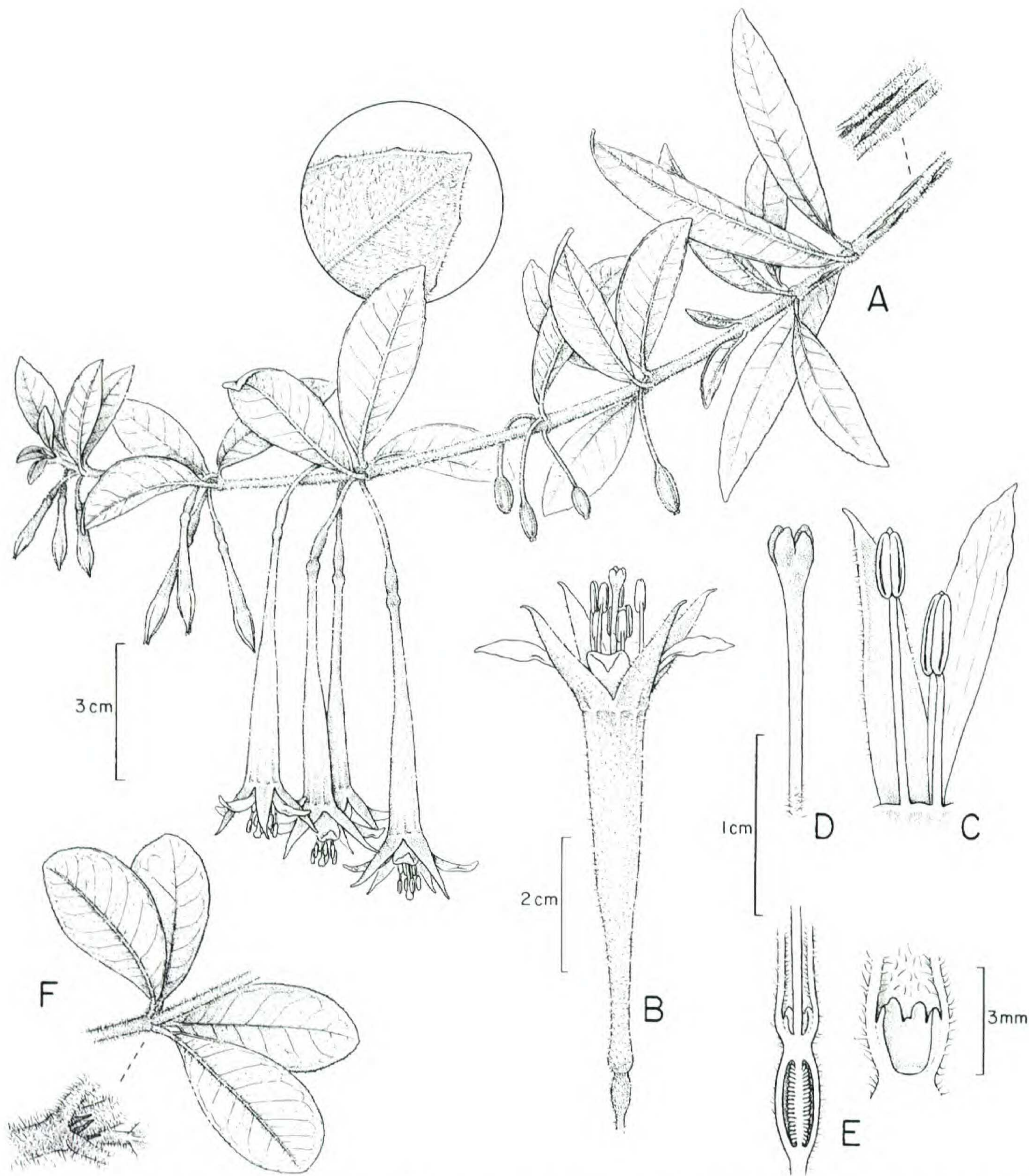


Figure 1. *Fuchsia rivularis* subsp. *pubescens* P. E. Berry & Hermsen. —A. Habit, with details of leaf and stem pubescence. —B. Flower at anthesis (inverted). —C. Detail of sepal, petal, and stamens from each of the two staminal whorls. —D. Upper part of style showing slightly 4-lobed stigma. —E. Longitudinal section through the ovary and lower section of the floral tube, with enlarged detail showing the nectariferous region at the base of the tube. —F. A typical whorl of leaves, with detail of pubescence and stipules. A–E drawn from Gentry *et al.* 74844, F drawn from Sánchez 304.

*Paratypes.* PERU. **Cajamarca:** Jaen Province, Colasay District, Agua Fria 2 hrs. walk N and up from Colasay, 2000 m, 6°S, 79°10'W, 7 July 1993, *Milanowski & Shonle* 165 (MO); Prov. Cutervo, Distr. de San Andrés, Las Grutas, 2350 m, 13 Oct. 1987, *Sánchez* 304 (MO); Prov. Cutervo, La Pucarilla, between Socata and San Andrés, *Sánchez et al.* 5926 (MO); Socata–San Andrés, *López & Sagástegui* 5372 (MO); Achira, near Socota, Prov. Cuter-

vo, *Velarde* 7065 (Z); El Suro, Prov. Cutervo, *Velarde* 7022 (Z).

***Fuchsia mezae*** P. E. Berry & Hermsen, sp. nov.  
 TYPE: Peru. Huánuco: Quebrada antes de Utao, 2430 m, 4 Oct. 1965, *I. Meza* 360 (holotype, MO). Figure 2.

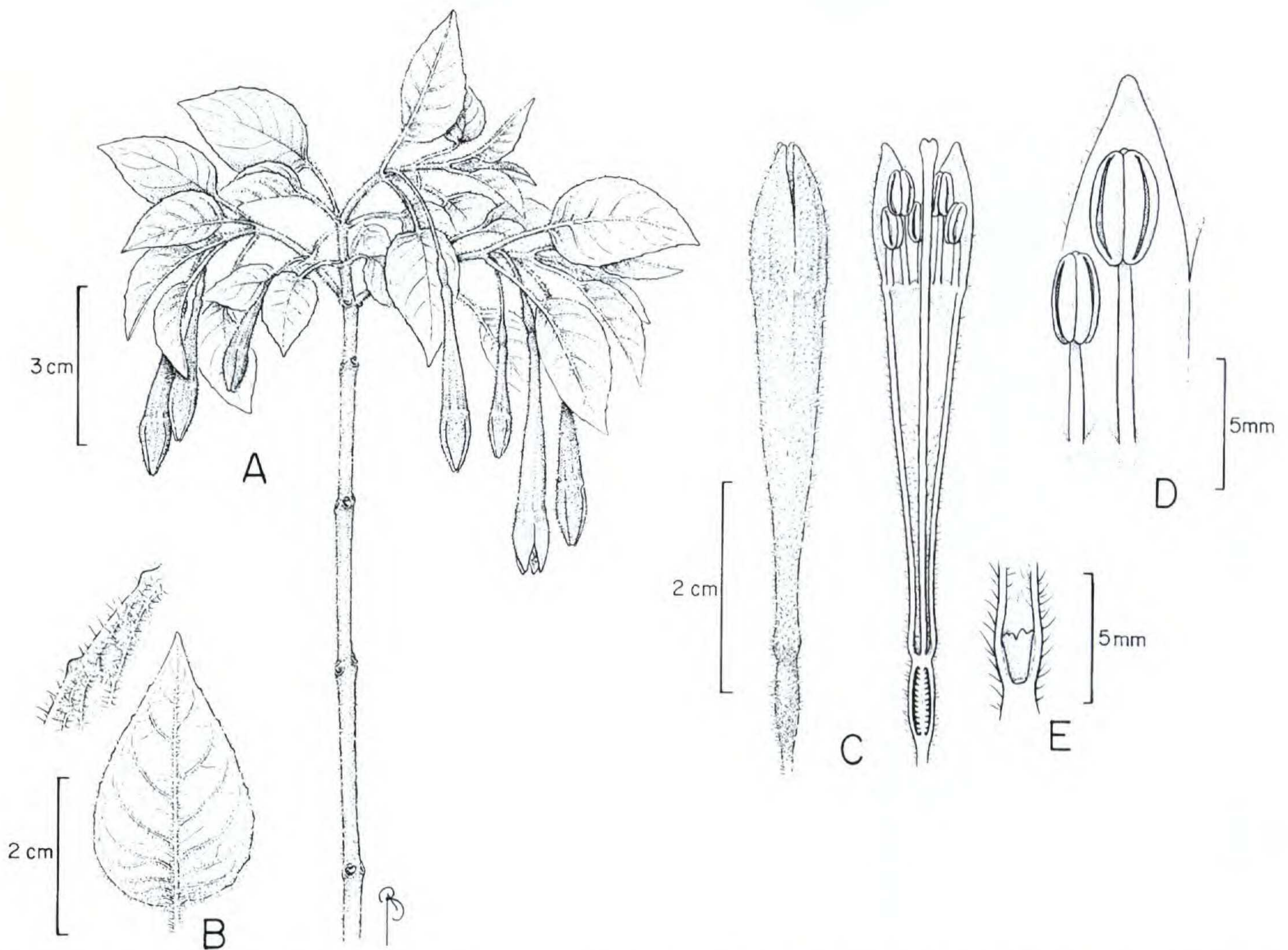


Figure 2. *Fuchsia mezae* P. E. Berry & Hermsen. —A. Habit. —B. Young leaf blade and detail of margin. —C. Intact flower (left) and longitudinal section (right) in advanced bud stage before anthesis. —D. Detail of sepal, and stamens from each of the two staminal whorls (note absence of petals). —E. Detail of nectariferous band at the base of the inside of the floral tube. Drawn from *Meza* 360.

Frutex ca. 0.5 m altus, ramulis erectis. Folia opposita vel ternata, juniora ovata pubescentia, 2–4 × 1.5–2.0 cm, petiolis junioribus 7–14 mm longis. Inflorescentia ex floribus axillaribus solitariis constans, pedicellis 15–20 mm longis. Flores nondum maturi, apetalii, tubo florali usque ad 40 mm longo, sepalis ante anthesin 10–13 mm longis.

Shrub ca. 0.5 m tall, stems erect and mostly bare of leaves, to 5 mm diam., lower internodes 5–6 cm long, leaf scars opposite or ternate; new flush of leaves and flowers subterminal on short side branches 1.5–4 cm long. Leaves mostly opposite, young expanding blades densely pubescent with ± erect whitish trichomes 0.5–0.7 mm long, blades ovate, 2–4 × 1.5–2 cm, with 7 to 9 secondary veins per side, densely pubescent on lower side, sparsely pubescent on upper surface, margins glandular-denticulate; petioles 7–14 mm long; stipules brown, triangular, 1 × 1 mm. Flowers axillary, preanthesal, pedicels 15–20 mm long, the largest flower with floral tube 40 mm long, 2–2.5 mm wide at the base, gradually tapered to ca. 5 mm wide at the base of the sepals, pink and pubescent outside, inside with a nectariferous band lining the basal 3 mm of the

tube; sepals 10–13 mm long, basally connate in the lower 1/2 to 1/3, green in the distal half and broader than the floral tube, sepals broadly acute at the apex, ca. 4 mm wide at their widest; petals 0. Stamens 8, the antesepalous filaments ca. 10 mm long, the alternating series ca. 6 mm long; anthers oblong, 3 mm long, 1.5 mm wide. Ovary narrowly cylindrical, 8–9 mm long, style pubescent in lower 1/3, stigma clavate, 2 mm long, 1.5 mm wide. Fruit not seen.

*Ecology and distribution.* Only known from the type specimen, found growing along a streamside at 2430 m in Huánuco, Peru, beginning to leaf and flower in early October.

Although *Fuchsia mezae* is known from a single specimen without fully expanded leaves or flowers, it is clearly a new species belonging to section *Hemsleyella*, which has 14 other recognized species (Berry, 1985). This section is an unusual group of species restricted to the tropical Andes and is characterized by its apetalous flowers, strongly seasonal flowering (usually during the dry season), common

presence of tubers, and smooth floral nectaries lining the base of the floral tubes. Most of the species in this section have alternate leaves, but three other Peruvian species in the section have opposite leaves, namely *F. cestroides* Schulze-Menz, *F. huanucoensis* P. E. Berry, and *F. tunariensis* Kuntze. *Fuchsia cestroides* has much smaller flowers and leaves, and *F. huanucoensis* is glabrous, with funnelform floral tubes, lanceolate sepals, and narrowly elliptic-ovate leaves. *Fuchsia mezae* is most similar to *F. tunariensis* but differs from it in its longer, stiffer indument, narrower floral tubes and sepals, and more erect habit. Section *Hemsleyella* is characterized by the great rarity of many of its species, some of them known from just one or a few collections. For this reason we feel justified in describing

this species, albeit without a full range of flowering and fruiting specimens, because it is clearly distinct from other members of the genus, and it calls attention to the high degree of local endemism in the mountains of central Peru.

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#### Literature Cited

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